

Energy Success Story:

Robert Packer Hospital Energy Conservation Project

Sayre, Bradford County, PA



A Bradford County hospital reduces its annual electricity consumption by over 15% with a multi-faceted energy conservation project!

The Grantee, In Their Words

Guthrie Robert Packer Hospital was established in 1885 to meet the health care needs of those working in the Sayre, PA railroad yard. Its educational mission is a distinguishing characteristic of Guthrie Robert Packer Hospital, dating back to 1901 when the School of Nursing was founded. Guthrie Robert Packer Hospital has grown to a 254-bed tertiary care teaching hospital providing high quality healthcare in the southern tier of New York and the northern tier of Pennsylvania. They offer a wide range of inpatient and outpatient services from a dedicated team of skilled physicians, health care professionals, and staff.

The Project, In Summary

Motivated to reduce energy costs, Robert Packer Hospital in Sayre Borough, Bradford County, engaged Envivity to perform a comprehensive Level II Energy Audit on the hospital campus. The comprehensive energy management plan outlined recommendations for energy conservation projects. In a separate project, the hospital also installed a CHP (combined heat and power) system to generate onsite electricity in conjunction with a 3-year plan to reduce energy usage at the facility.

Robert Packer Hospital deployed four of the audit recommendations utilizing funds from PEDA. These projects helped the hospital save energy and money while at the same time improving patient quality of care and equipment reliability. First, they optimized the chiller plant efficiency by implementing smart supervisory controls, installing new valves for temperature change (delta-T) correction, and added a water-side economizer to make chilled water in the winter at a very low cost. Second, they targeted daytime use areas for a retrofit of aging controls to modern equipment including controllers, valves, and sensors. Revised sequences and schedules were implemented to allow for greater variable air volume modulation as well as unoccupied modes of operation. Third, end-of-life rooftop ventilators were replaced to new rooftop air handlers that utilize modern energy recovery technology, and improve zone heat pump efficiency. The fourth and final phase of the project included the conversion of constant volume to variable air volume (VAV) handlers. Unit controllers and zone terminals were retrofitted to accommodate Variable Air Volume operation, greater fan turndown and unoccupied mode setbacks.

Project at a Glance

Name:

Guthrie Robert Packer Hospital
Energy Conservation Project

Location:

One Guthrie Square
Sayre, PA 18840
Bradford County

Project Size:

4,535,254 Kwh/yr electricity saved
11,910 mcf/yr natural gas saved

Principal Use:

Energy Conservation

Total Project Cost:

\$1,978,729

Grant Share:

\$500,000

Consultant:

1st consultant Envivity, Inc. of
State College, PA
2nd consultant Kimble, Inc. of
Elmira, NY

Project Period:

30 months from final design to
commissioning

Grant Project End Date:

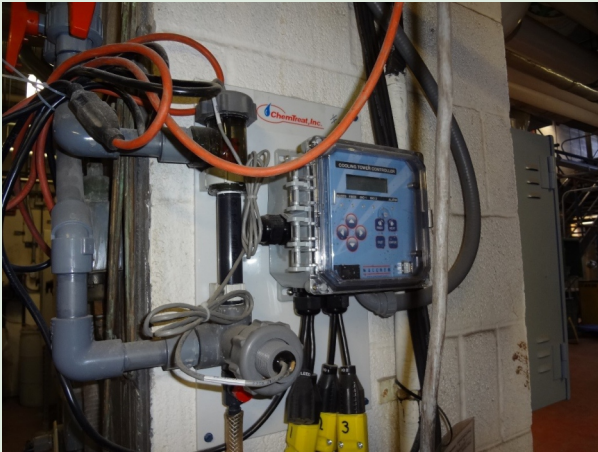
April 28, 2017



Project Photos



New rooftop air handler units



New controls for hospital cooling tower



New chilled water lines

Benefits:

Annual Savings:

- Energy Costs \$395,703

Lifetime Savings:

- Energy Costs (20 Years) \$5,900,000

Environmental Equivalent:

- Cars Removed from Road* 673
- CO2 Emissions* 3187 (tons)

*Annually

“The projects at Robert Packer Hospital highlights a significant opportunity for the healthcare industry in Pennsylvania. Who can argue with a 15% cost reduction, a reduction in air emissions, and improved plant quality and reliability to ultimately help patients heal better – it’s a win-win-win.”

Kevin Gombotz, PE, Envinity Building Energy Solutions

Results: Energy, Economy, Environment

The projects have come very close to their energy savings goals with an overall energy savings realization rate of 90%. Cost savings have exceeded expectations by 20%.

Pennsylvania Energy Development Authority is an independent public financing authority created in 1982 by the Pennsylvania Energy Development Authority and Emergency Powers Act and revitalized through an April 8, 2004 Executive Order. The Authority’s mission is to finance clean, advanced energy projects in Pennsylvania. The Authority can award grants, loans, and loan guarantees.